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Michael Hollatz

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EXAMINER

NG, CHRISTINE Y

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/846,544 | HOLLATZ, MICHAEL | |
| | Examiner | Art Unit | |
| | Christine Ng | 2616 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-11, 14, 15, 17-21, 23-50, 52 and 54-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,707,821 to Shaffer et al in view of U.S. Patent No. 6,741,586 to Schuster et al, and in further view of U.S. Patent No. 7,046,643 to Zellner et al.

Referring to claims 1, 31, 44-47 and 57, Shaffer teaches in Figure 13 a portion of a device, e.g., implemented on a IP phone, that multiplexes VoIP packets and other data packets onto a common data link using a priority queuing mechanism. The VoIP packets are created by digitally encoding a voice capture channel using an analog to digital converter (22) and a voice encoder (122). Data packets are received from other applications running on the computer, e.g., a web-browser, e-mail application, or networked file system application (receiving data packets from data processing device) (Column 1, lines 50-59). Data packets pass through an optional data packet fragmenter (146), which segments large data packets into sequences of smaller data packets before submission to the queue (dividing the data packets into divided data packets) (Column 9, lines 9-14). The packet scheduler (144) multiplexes packets from the queues (106,108) to the data link interface (interspersing the divided packets among the

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voice packets and sending the data packets and the voice packets to a communication network) (Figure 6). Shaffer et al also disclose assigning a first predetermined priority level (highest priority) to the voice packets. The voice packets from time-critical packet queue 106 are given a higher priority than the data packets from data packet queue 108. Refer to Column 5, lines 16-37 and Column 9, lines 1-14.

Shaffer does not specifically disclose receiving data packets from a *plurality* of data processing devices.

Schuster et al disclose in Figure 1 a VOIP phone 108a that receives data packet from a plurality of data processing devices (user computer 50 and PDA 110a). Refer to Column 6, line 40 to Column 7, line 7 and Column 7, lines 57-67. Furthermore, as shown in Figure 3, a VOIP phone 108a includes interfaces (248, 254, 256, 267, 265, 262, 264, 96) to several different devices. Refer to Column 11, line 49 to Column 12, line 63. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include receiving data packets from a *plurality* of data processing devices; the motivation being so that a system can support several different types of devices, thereby diversifying the system.

Shaffer also does not disclose: assigning a second user selected predetermined priority level to data packets from a first data processing device of the plurality of data processing devices and a third user selected predetermined priority level to data packets from a second data processing device of the plurality of data processing devices where the first, second and third priority levels are all different; and sending the

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data packets based upon respective priorities of the voice packets and the data packets.

Zellner et al disclose in Figure 1 a mobile handset 10a that supports various applications 10a-10c such as email, paging, world-wide web browsing, internet telephony and file transfer. Users can select the priority levels of each application in order to control their transmission order preference. The user can pre-select the available priority levels for certain transactions that may be transmitted. For example, if there are four priority levels, the user can designate the highest two priority levels to voice services and the lowest level priority level to interactive games. Refer to Column 3, line 65 to Column 4, line 13; Column 4, lines 40-53; Column 5, lines 36-52; Column 6, lines 11-25; and Column 9, line 55 to Column 10, line 4. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include assigning a second user selected predetermined priority level to data packets from a first data processing device of the plurality of data processing devices and a third user selected predetermined priority level to data packets from a second data processing device of the plurality of data processing devices where the first, second and third priority levels are all different; and sending the data packets based upon respective priorities of the voice packets and the data packets. One would be motivated to do so in order to prioritize packets so that time critical data such as voice is sent out first, followed by successively lower priority packets, thereby ensuring that real time data is sent with the highest quality of service and non-real time data is sent last, since it is not time sensitive.

Referring to claim 5 and 48, Shaffer teaches in Figure 10 the method described in reference to claims 1 and 44 that the first and second data processing device may be selected from a group consisting of a computer (78), a laptop computer (none), a personal digital assistant (none), or a cellular telephone (none). Refer to Column 7, lines 57-64.

Referring to claims 6-8, 15, 20, 21, 25-27, 32, 49, 50, 55 and 58, Shaffer teaches in Figure 6 the method described in reference to claims 1, 31 and 44 above and also teaches that the scheduler selects time-critical packets from queue 106 (the Voice Packet queue) until queue 106 is emptied (voice packets have a higher priority than data packets and are processed before the data packets, the priority is assigned based upon how the packets are processed and preference is given to voice packets). Refer to Column 5, lines 16-37.

Referring to claim 9, Shaffer does not disclose wherein at least one of the data packet priorities is a higher priority than the voice packet priority and higher priority data packets are processed before the voice packets.

Zellner et al disclose a method of assigning user-selected priority levels to different applications. Though voice (internet telephony) applications has a higher default priority than data (email) applications, the user can change the data application to be of a higher priority if the email contains time-sensitive material. So, the email packets will be processed before the voice packets. Refer to Column 3, line 65 to Column 4, line 24. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include wherein at least one of the data packet

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priorities is a higher priority than the voice packet priority and higher priority data packets are processed before the voice packets. One would have been motivated to do so in case the user selected a data packet application to be of higher priority than a voice packet application, thereby allowing flexibility in transmission order preference.

Referring to claims 10, 18, 28, 33 and 54, Shaffer teaches in Figure 10 the method described in reference to claims 1, 15, 20, 31 and 44 above and also teaches that the network is an Internet Protocol network (100). Refer to Column 7, lines 31-34.

Referring to claim 17, Shaffer teaches in Figure 10 the method described in reference to claim 15 above that the first and second data processing device may be selected from a group consisting of a computer (78), a laptop computer (none), a personal digital assistant (none), or a cellular telephone (none). Refer to Column 7, lines 57-64.

Referring to claims 36 and 59, Shaffer teaches in Figure 13 the method described in reference to claim 1 above that data link 74 is clearly a two-way path. The network described is clearly a two-way network that can both transmit data or receive data from another source.

Referring to claim 38, Shaffer teaches in Figure 10 the method described in reference to claim 36 above that the first and second data processing device may be selected from a group consisting of a computer (78), a laptop computer (none), a personal digital assistant (none), or a cellular telephone (none). Refer to Column 7, lines 57-64.

Referring to claim 39, Shaffer teaches in Figure 6 the method described in reference to claim 36 above and also teaches that the scheduler selects time-critical packets from queue 106 (the Voice Packet queue) until queue 106 is emptied. Refer to Column 5, lines 16-37.

Referring to claim 40, Shaffer teaches in Figure 10 the method described in reference to claim 36 above and also teaches that the network is an Internet Protocol network (100). Refer to Column 7, lines 31-34.

Referring to claim 56, Shaffer teaches in Figure 13 the method described in reference to claim 1 above and also teaches that the VoIP packets are created by digitally encoding a voice capture channel, e.g., from a microphone or headset, (user interface) using an analog-to-digital converter (22) and a voice encoder (122). Refer to Column 1, lines 53-56.

Referring to claims 3, 23, 24 and 37, Shaffer teaches the method described in reference to claims 1, 20, 36 and 44 above and also teaches in Figure 4 that the two data packets have been divided into 3 equal parts and 1 unequal part.

Referring to claims 4 and 52, Shaffer teaches the method described in reference to claims 1, 20, 36 and 44 above and also teaches in Figure 4 that the two data packets have been randomly divided into 3 equal parts and 1 unequal part. The 3 equal parts and 1 unequal part are random, non-uniform size smaller packets. Packets are randomly divided since only large packets need to be divided.

Referring to claims 11, 14, 19, 29, 30, 34, 35, and 41-43, Shaffer teaches in Figure 10 the method described in reference to claims 1, 15, 20, 31, 36 and 44 above

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and also has clearly taught that the network is an Internet Protocol network (100). Refer to Column 7, lines 31-34. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art that the Ethernet protocol is used in networks using the Internet Protocol. One of ordinary skill in the art would have been motivated to use the Ethernet Protocol on an Internet Protocol network is a well-known industry practice.

3. Claims 2, 16, 22 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,707,821 to Shaffer et al in view of U.S. Patent No. 6,741,586 to Schuster et al in view of U.S. Patent No. 7,046,643 to Zellner et al, and in further view of U.S. Patent No. 6,904,037 to Oran et al.

Shaffer does not disclose wherein the step of determining further comprises comparing the data packets to a size threshold and determining that the data packets are to be divided if the data packets are larger than the size threshold.

Oran et al disclose in Figure 5 a segmenting block 68 that fragments each received data packet if it is longer than a given threshold size. Segments are stored in a segment data packet buffer 72. Refer to Column 4, line 64 to Column 5, line 31. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the step of determining further comprises comparing the data packets to a size threshold and determining that the data packets are to be divided if the data packets are larger than the size threshold. One would be motivated to do so in order to segment large data packets to in order to avoid network congestion and facilitate scheduling since smaller data packets are easier to schedule. Shaffer et

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al also disclose that when the scheduler has difficulty scheduling large data packets for transmission, it sends the data to a fragmenter to fragment the large packets (Column 9, lines 9-14).

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,707,821 to Shaffer et al in view of U.S. Patent No. 6,741,586 to Schuster et al in view of U.S. Patent No. 7,046,643 to Zellner et al, and in further view of U.S. Patent No. 6,081,720 to Sampson.

Shaffer et al do not disclose wherein the voice packets are exchanged over the packet network by a first Ethernet transceiver and data packets are exchanged with the first data processing device use a second transceiver.

Sampson et al disclose in Figure 2 a device with a voice transceiver segment 30 and a data transceiver segment 32 that communicate via an Ethernet LAN 34. The voice transceiver segment 30 is used to process voice signals and the data transceiver segment 32 is used to process data signals. Refer to Column 4, line 23 to Column 5, line 26. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include wherein the voice packets are exchanged over the packet network by a first Ethernet transceiver and data packets are exchanged with the first data processing device use a second transceiver. One would have been motivated to do so since voice and data require different processing methods so different modules are used to handle them.

5. Claims 13 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,707,821 to Shaffer et al in view of U.S. Patent No. 6,741,586 to

Schuster et al in view of U.S. Patent No. 7,046,643 to Zellner et al, and in further view of U.S. Patent No, 5,453,987 to Tran.

Shaffer et al do not disclose wherein selected data packets exchanged with the first data processing device are assigned a higher priority than the voice packets, and all remaining data packets exchanged with the first data processing device are assigned a lower priority than the voice packets.

Tran discloses that in a system using a synchronous TDM protocol, voice and data terminals share the time slots. Users transmitting voice packets will be given higher priority over those users transmitting data packets. However, certain classes of data, such as data for real-time applications, may be given higher priority than voice packets. Refer to Column 4, lines 16-38. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include wherein selected data packets exchanged with the first data processing device are assigned a higher priority than the voice packets, and all remaining data packets exchanged with the first data processing device are assigned a lower priority than the voice packets. One would have been motivated to do so in order to allow certain data packets, such as real-time data packets, to be transmitted before voice packets that are not as time-critical.

Response to Arguments

6. Applicant's arguments filed August 30, 2006 have been fully considered but they are not persuasive.

Referring to the argument of claims 1, 3-15, 17-21, 23-50 and 52-59 (page 20,

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line 21 to page 22, line 19): Zellner et al disclose in Figure 1 a mobile handset 10a that supports various applications 10a-10c such as email, paging, world-wide web browsing, internet telephony and file transfer. Users can select the priority levels of each application in order to control their transmission order preference. For example, if there are four priority levels, the user can designate the highest two priority levels to voice services and the lowest level priority level to interactive games. Zellner et al also disclose that packets of different applications can be interspersed based on priority levels. If there is a lower priority transmission occurring, the lower priority transaction can be discontinued in favor of a higher priority transaction. Although the method of assigning priority levels is for pricing purposes, the method involves allowing the user to select priority levels of packets belonging to different applications, which affects their transmission order. Refer to Column 3, line 65 to Column 4, line 13; Column 4, lines 40-53; Column 5, lines 36-52; Column 6, lines 11-25; and Column 9, line 55 to Column 10, line 4.

Referring to the argument of claims 4 and 52 (page 22, lines 20-32): Shaffer discloses in Figure 4 that the two data packets have been randomly divided into 3 equal parts and 1 unequal part. The 3 equal parts and 1 unequal part are random, non-uniform size smaller packets. Even though the pattern of 3 equal parts and 1 unequal part is not random, the packets themselves are randomly divided. Packets are randomly divided since only large packets need to be divided.


Referring to the argument of claims 13 and 53 (page 23, lines 1-9): Refer to the rejection of claims 13 and 53.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (571) 272-3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

C. Ng 
May 8, 2007


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